DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-000390
Date Inspected: 22-Aug-2007

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 800
OSM Departure Time: 2100
Location: Shanghai, China

CWI Name: Xue Yian

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: MTR's / 77 Meter mock-up

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Material Test Reports:

Quality Assurance (QA) Inspector Brannon in the am shift observed material received in the ZPMC yard. There were a total of 40 out of 105 plates received with plate thicknesses ranging from 8mm to 20mm. The plates were all ASTM A709M-345T2-X and ASTM A709M-345T2-X-S plate material and were accompanied with material test reports (MTR). The MTRs could not be reviewed on the day the plates were observed for their general condition and markings but will be reviewed at the earliest opportunity. QA Inspector Brannon assigned lot number B22-024-07 to this lot of plate.

77 Mockup-skin plate D side 1:

QA Inspector Brannon periodically observed ZPMC qualified welder Mr. Xue Yian ID#040634 groove welding root and two fill passes on side 1 joining MK# MA5 to mp14 for skin plate D. Mr. Yian was observed welding in the 1G (flat), position utilizing a submerged arc welding (SAW) process using a 4.8mm diameter electrode, filler metal classification JW-3 EM12K. QA Inspector Brannon observed preheat and welding parameters measured by the ZPMC QC Inspector Xu Lefeng appeared to be in general compliance with the approved Welding Procedure Specification, WPS-B-T-2321-B-P3-S-1, and revision 1. After completion of the root pass QA Inspector Brannon observed ZPMC NDT Technician Mr. Cai Xinxin perform magnetic particle test (MT) on 100 percent of the root pass. Mr. Xinxin stated that he did not find any relevant indication. Note: A 100mm section of the root pass was

excavated and re-welded. After completion of the root and 2 fill passes the skin plate D was flipped to side 2.

77 Mockup-skin plate D side 2:
QA Inspector Brannon periodically observed ZPMC qualified welder Mr. Xue Yian ID#040634 groove welding three fill passs on side 2 joining MK# MA5 to mp14 for skin plate D. Mr. Yian was observed welding in the 1G (flat), position utilizing a submerged arc welding (SAW) process using a 4.8mm diameter electrode, filler metal classification JW-3 EM12K. Mr. Yian appeared to be using proper inter-pass cleaning methods. QA Inspector Brannon observed preheat and welding parameters measured by the ZPMC QC Inspector Xu Lefeng, observed by QA Inspector Brannon appeared to be in general compliance with the approved Welding Procedure Specification, WPS-B-T-2321-B-P3-S, and revision 0. After completion of the three fill passes the skin plate D was flipped to side 1.

77 Mockup-skin plate D side 1:
QA Inspector Brannon periodically observed ZPMC qualified welder Mr. Xue Yian ID#040634 groove welding two fill passes on side 1 joining MK# MA5 to mp14 for skin plate D. Mr. Yian was observed welding in the 1G (flat), position utilizing a submerged arc welding (SAW) process using a 4.8mm diameter electrode, filler metal classification JW-3 EM12K. Mr. Yian appeared to be using proper inter-pass cleaning methods. QA Inspector Brannon observed preheat and welding parameters measured by the ZPMC QC Inspector Xu Lefeng appeared to be in general compliance with the approved Welding Procedure Specification, WPS-B-T-2321-B-P3-S, and revision 0. After completion of the three fill passes the skin plate D was flipped to side 2.

77 Mockup-skin plate D side 2:
QA Inspector Brannon periodically observed ZPMC qualified welder Mr. Xue Yian ID#040634 groove welding two fill passes on side 2 joining MK# MA5 to mp14 for skin plate D. Mr. Yian was observed welding in the 1G (flat), position utilizing a submerged arc welding (SAW) process using a 4.8mm diameter electrode, filler metal classification JW-3 EM12K. Mr. Yian appeared to be using proper inter-pass cleaning methods. QA Inspector Brannon observed preheat and welding parameters measured by the ZPMC QC Inspector Xu Lefeng, observed by QA Inspector Brannon appeared to be in general compliance with the approved Welding Procedure Specification, WPS-B-T-2321-B-P3-S, and revision 0. After completion of the three fill passes the skin plate D was flipped to side 1.
77 Mockup-skin plate D side 1: QA Inspector Brannon periodically observed ZPMC qualified welder Mr. Xue Yian ID#040634 groove welding twelve fill passes on side 1 joining MK# MA5 to mp14 for skin plate D. Mr. Yian was observed welding in the 1G (flat), position utilizing a submerged arc welding (SAW) process using a 4.8mm diameter electrode, filler metal classification JW-3 EM12K on a motorized track. Mr. Yian appeared to be using proper inter-pass cleaning methods. QA Inspector Brannon observed preheat and welding parameters measured by the ZPMC QC Inspector Xu Lefeng, observed by QA Inspector Brannon appeared to be in general compliance with the approved Welding Procedure Specification, WPS-B-T-2321-B-P3-S, and revision 0.

The following digital photographs provides additional detail.

WELDING INSPECTION REPORT

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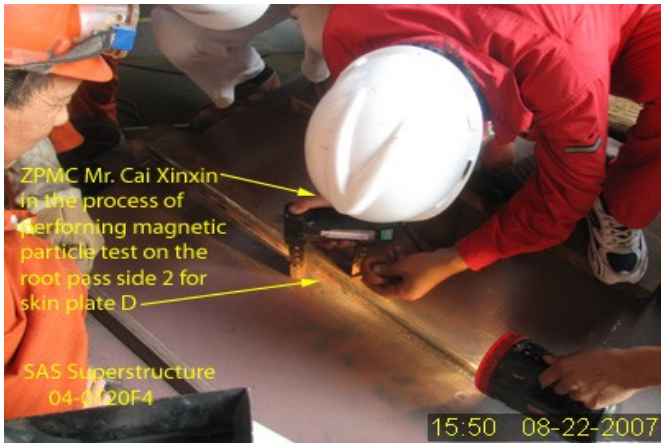

Summary of Conversations:

As stated within the report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Brannon,Sherri	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer